

Preliminary Amendment

Applicant: Thomas A. Saksa

Serial No.: 09/940,363

Filed: August 27, 2001

Docket No.: 10011180-1

Title: MEASUREMENT AND MARKING DEVICE

IN THE CLAIMS

Please amend claims 1, 2, 4-9, 12, 13, 22, 23, and 27-35 as follows:

1. (Currently Amended) A ~~measurement and marking device~~, comprising:

~~a housing;~~

a positional ~~sensing assembly sensor~~ mounted in the a housing and adapted to sense a ~~position of the housing position relative to an object~~ as the housing is moved along a surface of the object;

a printhead assembly mounted in the housing and adapted to print on the surface of ~~the object~~ as the housing is moved along the surface of ~~the object~~;

a controller mounted in the housing and communicating with the positional sensing ~~assembly sensor~~ and the printhead assembly, wherein the controller ~~is~~ adapted to operate the printhead assembly to print a mark on the surface of the object based on the position of the housing position relative to the object as the housing is moved along the surface of ~~the object~~; and

~~a user~~ an interface mounted on the housing and communicating with the controller, the ~~user~~ interface including an input configured for operation by a user to record at least one ~~position of the housing position relative to the object~~,

~~wherein the housing has~~ having a first side adapted to be oriented substantially parallel with the surface of ~~the object~~ as the housing is moved along the surface of ~~the object~~ and includes a first opening formed in the first side and a second opening formed in the first side,

~~wherein the positional sensing assembly sensor communicates~~ communicating with the first side of the housing through the a first opening and the printhead assembly ~~communicates~~ communicating with the first side of the housing through the a second opening,

~~wherein the controller is~~ adapted to store the at least one ~~position of the housing position relative to the object~~ as a measurement of the object when the input of the user interface is operated by the user.

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2. (Currently Amended) The ~~measurement and marking device~~ of claim 1, wherein the ~~positional sensing assembly sensor~~ is adapted to sense a ~~position of the housing~~ position relative to a first object and measure a dimension of the first object as the housing is moved along a surface of the first object, wherein the ~~positional sensing assembly sensor~~ is adapted to sense a ~~position of the housing~~ position relative to a second object as the housing is moved along a surface of the second object, and wherein the controller is adapted to operate the printhead ~~assembly~~ to print the ~~mark~~ on the surface of the second object based on the dimension of the first object and the ~~position of the housing~~ position relative to the second object as the housing is moved along the surface of the second object.

3. (Cancelled)

4. (Currently Amended) The ~~measurement and marking device~~ of claim 2, wherein the controller is adapted to operate the printhead ~~assembly~~ to print the ~~mark~~ on the surface of the second object based on the ~~position of the housing~~ position relative to the first object when the input is operated by the user and the ~~position of the housing~~ position relative to the second object as the housing is moved along the surface of the second object.

5. (Currently Amended) The ~~measurement and marking device~~ of claim 1, wherein the controller is adapted to operate the printhead ~~assembly~~ to print a plurality of markings on the surface ~~of the object~~ at predetermined intervals as the housing is moved along the surface ~~of the object~~.

6. (Currently Amended) The ~~measurement and marking device~~ of claim 5, wherein the plurality of markings represent one of standard measurements and scaled measurements.

7. (Currently Amended) The ~~measurement and marking device~~ of claim 1, wherein the printhead ~~assembly~~ is adapted to print at least one of graphics and text on the surface ~~of the object~~ as the housing is moved along the surface ~~of the object~~.

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8. (Currently Amended) The ~~measurement and marking device~~ of claim 1, wherein the ~~positional sensing assembly sensor~~ includes a wheel rotatably mounted in the housing, wherein the wheel is adapted to contact the surface of the object and rotate as the housing is moved along the surface of the object, and wherein the controller is adapted to determine the ~~position of the housing~~ position relative to the object based on rotation of the wheel.

9. (Currently Amended) The ~~measurement and marking device~~ of claim 1, wherein the ~~positional sensing assembly sensor~~ includes an optical sensor mounted in the housing, wherein the optical sensor is adapted to sense the surface of the object as the housing is moved along the surface of the object, and wherein the controller is adapted to determine the ~~position of the housing~~ position relative to the object based on the surface of the object.

10-11. (Cancelled)

12. (Currently Amended) The ~~measurement and marking device~~ of claim 1, wherein the printhead ~~assembly~~ includes a plurality of orifices formed in a front face thereof, wherein the front face communicates with the first side of the housing.

13. (Currently Amended) The ~~measurement and marking device~~ of claim 1, further comprising:

a power supply mounted in the housing, wherein the power supply supplies power to the ~~measurement and marking device~~.

14-21. (Cancelled)

22. (Currently Amended) A method of ~~transforming a measurement of a first object to a second object~~, the method comprising:

moving a housing along a ~~surface of the first object~~ surface, including orienting a first side of the housing substantially parallel with the ~~surface of the first object~~ surface;

sensing ~~a position of the housing~~ position relative to the first object with a positional ~~sensing assembly sensor~~ mounted in the housing and communicating with the first side of the

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housing through a first opening ~~in the first side of the housing~~ as the housing is moved along ~~the surface of the first object~~ surface;

locating a ~~feature of the first object~~ feature, including receiving user input at ~~the feature of the first object~~ feature with an input of ~~a user~~ an interface mounted on the housing and storing ~~the position of the housing~~ position at ~~the feature of the first object~~ feature as ~~the~~ a measurement of the first object with a controller mounted in the housing and communicating with the ~~user~~ interface;

moving the housing along a ~~surface of the second object~~ surface, including orienting the ~~first side of the housing~~ substantially parallel with ~~the surface of the second object~~ surface;

sensing ~~a position of the housing~~ position relative to the second object with the ~~positional sensing assembly~~ sensor as the housing is moved along ~~the surface of the second object~~ surface; and

printing ~~a mark representing the feature of the first object~~ on ~~the surface of the second object~~ surface with a printhead ~~assembly~~ mounted in the housing and communicating with the ~~first side of the housing~~ through a second opening ~~in the first side of the housing~~ when the ~~position of the housing~~ position relative to the second object coincides with ~~the position of the housing~~ position at ~~the feature of the first object~~ feature.

23. (Currently Amended) The method of claim 22, wherein sensing ~~the position of the housing~~ position relative to the first object includes measuring a dimension of the first object, wherein locating ~~the feature of the first object~~ feature includes measuring at least one of a dimension to ~~the feature of the first object~~ feature and a dimension ~~of the feature of the first object~~ feature, and wherein printing ~~the mark on the surface of the second object~~ includes printing ~~the mark on the surface of the second object~~ surface when the ~~position of the housing~~ position relative to the second object coincides with the at least one of the dimension to ~~the feature of the first object~~ feature and the dimension of ~~the feature of the first object~~ feature.

24-26. (Cancelled)

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27. (Currently Amended) The method of claim 22, wherein printing ~~the mark on the surface of the second object~~ surface includes printing at least one of graphics and text on the ~~surface of the second object~~ surface.

28. (Currently Amended) The method of claim 22, wherein moving the housing along the ~~surface of the first object~~ surface and ~~the surface of the second object~~ surface includes contacting ~~the surface of the first object~~ surface and ~~the surface of the second object~~ surface with a wheel rotatably mounted in the housing and rotating the wheel, and wherein sensing ~~the position of the housing~~ position relative to the first object and the second object includes determining ~~the position of the housing~~ position relative to the first object and the second object based on rotation of the wheel.

29. (Currently Amended) The method of claim 22, wherein moving the housing along the ~~surface of the first object~~ surface and ~~the surface of the second object~~ surface includes sensing ~~the surface of the first object~~ surface and ~~the surface of the second object~~ surface with an optical sensor mounted in the housing, and wherein sensing ~~the position of the housing~~ position relative to the first object and the second object includes determining ~~the position of the housing~~ position relative to the first object and the second object based on ~~the surface of the first object~~ surface and ~~the surface of the second object~~ surface, respectively.

30. (Currently Amended) The ~~measurement and marking device~~ of claim 1, wherein the positional ~~sensing assembly sensor~~ is adapted to measure a dimension of a first object as the housing is moved along a surface of the first object, and wherein the controller is adapted to operate the printhead ~~assembly~~ to print ~~the mark on a surface of a second object at the dimension of the first object as the housing is moved along the surface of the second object.~~

31. (Currently Amended) The ~~measurement and marking device~~ of claim 1, wherein the positional ~~sensing assembly sensor~~ is adapted to measure a dimension of a first object as the housing is moved along a surface of the first object, and wherein the controller is adapted to operate the printhead ~~assembly~~ to print ~~the mark on a surface of a second object at~~

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predetermined intervals within the dimension of the first object as the housing is moved along the surface of the second object.

32. (Currently Amended) The method of claim 22, wherein sensing ~~the position of the~~ housing position relative to the first object includes measuring a dimension of the first object, and wherein printing ~~the mark on the surface of the second object~~ surface includes printing ~~the mark on the surface of the second object~~ surface at the dimension of the first object.

33. (Currently Amended) The method of claim 22, wherein sensing ~~the position of the~~ housing position relative to the first object includes measuring a dimension of the first object, and wherein printing ~~the mark on the surface of the second object~~ surface includes printing ~~the mark on the surface of the second object~~ surface at predetermined intervals within the dimension of the first object.

34. (Currently Amended) The ~~measurement and marking device~~ of claim 1, wherein the controller is adapted to operate the printhead ~~assembly~~ to print ~~the mark on the surface of the~~ object based on ~~the position of the housing~~ position relative to the object and the measurement of ~~the object~~ as stored by the controller.

35. (Currently Amended) The method of claim 22, wherein printing ~~the mark on the~~ ~~surface of the second object~~ surface includes printing ~~the mark on the surface of the second~~ object surface based on ~~the position of the housing~~ position relative to the second object and the measurement of the first object as stored by the controller.